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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,859	12/28/2000	Johan Molno	34647-00414USPT	1454
27045	7590	06/29/2005	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			PIZARRO, RICARDO M	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/752,859	<b>Applicant(s)</b> MOLNO ET AL.	
	<b>Examiner</b> Ricardo Pizarro	<b>Art Unit</b> 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13, 19-21 and 24-27 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-9, 14-18, and 28 is/are rejected.
- 7) ☒ Claim(s) 5-7, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 14 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No 6,597,681 ( Conner) in view of US patent No. 6,904,031 ( Ramaswamy).

Regarding claim 1, Conner discloses a wireless communication network comprising a method for allocating user dedicated control channels on an available radio channel resource ( multiframe in Figs. 3A, 3B) for transmission of control signals, wherein a first delay sensitive user application ( i.e. voice col 4 line 40) and at least a second user application ( data, col 4 line 40) which is less delay sensitive than the first user application ( data less sensitive than speech), are assigned for user data transmissions on a packet data traffic channel, the method comprising the steps of allocating logical control channel associated with user applications ( logical channels are located within logical multi frame generated by unit 112 in Fig. 2, col 4 line 43-48)

Regarding claim 14 , Conner discloses a plurality of base stations for radio communication with mobile stations ( Plurality of base stations 110 in Fig. 1, col 3 lines 51) of user data over packet data traffic channels; a radio transmission control node for

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controlling the operation of said plurality of base stations ( BTS controller not shown, col 3 line 59)) ; and a scheduler associated with each of the plurality of base stations, ( Scheduler 114 in Fig. 2 in each base station, col 4 line 36) wherein the scheduler operates to: allocate logical control channel associated with at user applications ( i.e. voice, data, col 4 lines 39 and 49-63)

Regarding Claim 28 , Conner discloses a system for allocating logical control channels associated with logical traffic channels( logical channels are located within logical multi frame generated by unit 112 in Fig. 2, col 4 line 43) on an available radio channel resource for transmission of control signals ( multiframe in Figs. 3A 3B) the method comprising the steps of: allocating logical control channel on available radio channel resource ( logical channels are located within logical multi frame generated by unit 112 in Fig. 2, col 4 line 43-48).

Conner did not specifically disclose assigning/allocating those channels based on association with a delay sensitive application ( speech) and a less delay sensitive application ( data), as in claims 1 , 14 and 28.

However Ramaswamy discloses a wireless system including a TDMA multi-frame wherein a first control channel is allocated based on association with a delay sensitive application ( allocation of several pairs of audio packet slots, col 2 line 59) and a second channel is allocated in association with a less delay sensitive application ( allocation of one pair of data slots within the structure, col 2 line 58).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Conner system by allocating channels

based on their delay sensitivity in order for the system to have the capability of using the data link for signaling information and the audio link for real time applications.

The motivation to do so is to reduce the number of channel to be allocated , therefore reducing the frequency spectrum that needs to be allocated..

2. Claims 8-9, 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner and Ramaswamy in further view of US patent No. 6,584,084 (Barany).

Ramaswamy and Conner did not specifically disclose said first logical channel is allocated in said available resource according to a first repetition pattern , as in claim 8, said second logical channel is allocated in said available resource according to a second repetition pattern , as in claim 9, wherein said radio transmission control node is a station control node as in claim 15.

However Barany discloses said first logical channel is allocated in said available resource according to a first repetition pattern ( i.e. reuse pattern 1/3 col 4 lines 63-64), as in claim 8; said second logical channel is allocated in said available resource according to a second repetition pattern ( i.e. reuse pattern 1/3 col 14 line 34), as in claim 9; wherein said radio transmission control node is a station control node ( col 4 lines 17-18), as in claim 15.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Conner and Ramaswamy references in order to have the system increase the spectrum allocated for packet-based services and therefore increase the capacity available to users.

The motivation to do so is to increase the capacity for carrying control and traffic signaling over a packet-based wireless network.

3. Claims 2-4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner and Ramaswamy in further view of US patent No . 6.516,350 ( Lumelski).

Conner and Ramaswamy did not specifically disclosed a ratio between said first and second parts of said available radio channel resource is selected based on a network configuration as in claims 2 and 16; a ratio between said first and second parts of said available radio channel resource is selected based on said first and at least second user applications , as in claims 3 and 15; wherein a ratio between said first and second parts of said available radio channel resource is 50%/a, as in claim 4 and 16.

However Lumelski disclose a self regulated resource management disclosing that the ratio of global to local resources in a network van be based on preferences of content owners ( col 5 lines 60-65)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention that the kind of ratio among resources in the network would certainly be dependant on different factors such as configuration, traffic ( i.e., video or data) and traffic demands in the network and percentages assigned could have also been based on the system design, in order to properly adjust the capacity in the system for carrying control and traffic signals over a packet based wireless network. It is noted that no unexpected results are cited as an outcome of the ratios disclosed by applicant.

The motivation to do so is to obtain a method in which regions in which extra capacity is needed additional carriers may be added to the cell segments within the region, which may be a region having high bursty traffic conditions.

***Allowable Subject Matter***

4. Claims 10-13, 19-21 and 24-27 are allowed.

Claims 5-7 and 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim.

***Conclusion***

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(571) 272-3126

(for formal communications intended for entry, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to 220 South 20<sup>th</sup> Street, Crystal Plaza Two, Lobby, Room 1B03, Arlington, Va 22202 (Customer Window).

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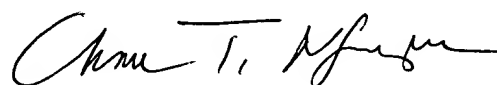
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Ricardo Pizarro** whose telephone number is (571) 272-3077. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:30 PM. .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chau Nguyen** can be reached on (571) 272-3126

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/22/05

Ricardo Pizarro



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